

1/27

Figure 1A

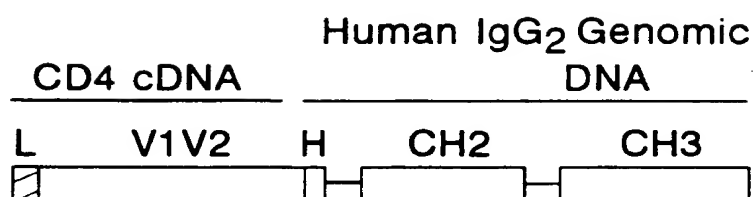
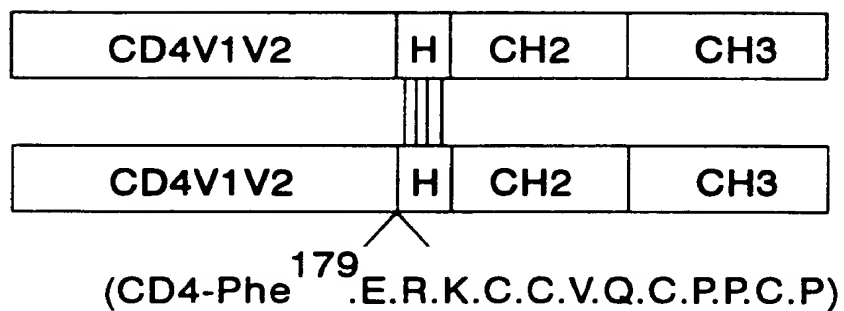


Figure 1B



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Figure 2A

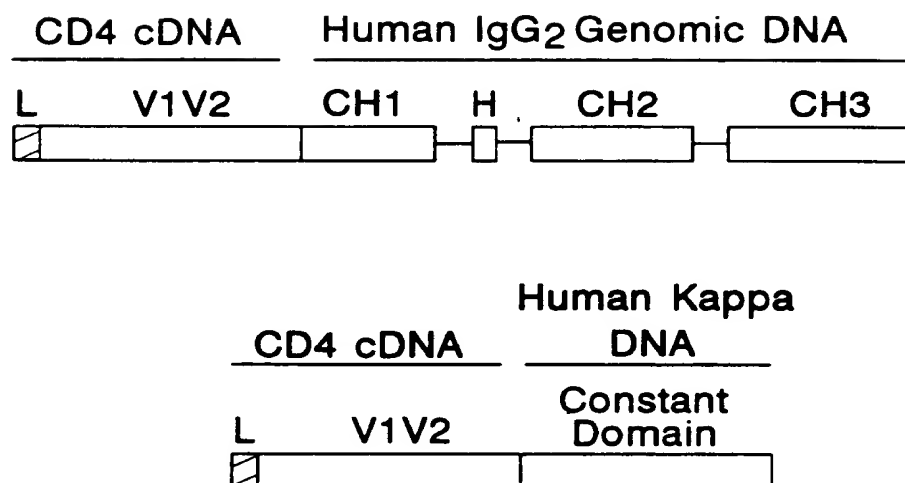
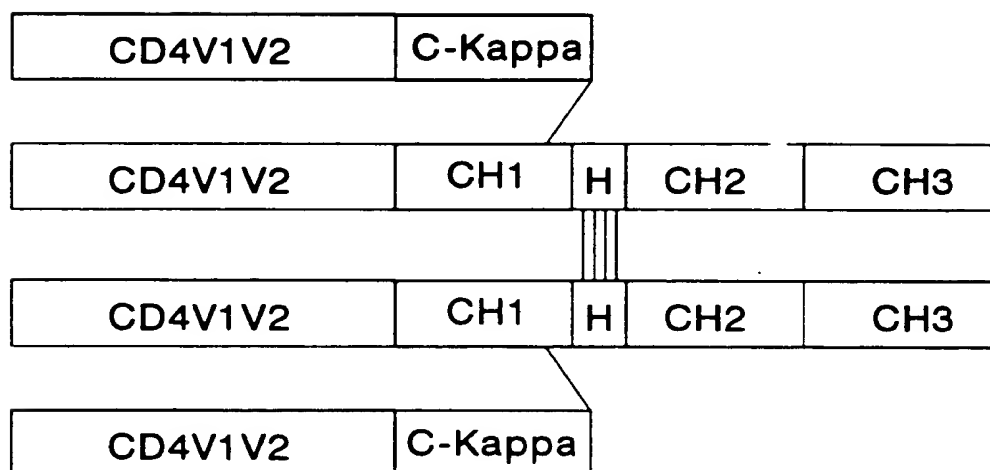


Figure 2B





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G S F L T K G P S K L N D R 312  
 GGC TTC TTA ACT AAA GGT CCA TCC AAG CTG AAT GAT CGC  
  
 A D S R R S L W D Q G N F P 354  
 GCT GAC TCA AGA AGC CTT TGG GAC CAA GGA AAC TTC CCC  
  
 L I I K N L K I E D S D T Y 396  
 CTG ATC ATC AAG AAT CTT AAG ATA GAA GAC TCA GAT ACT TAC  
  
 I C E V E D Q K E E V Q L L 438  
 ATC TGT GAA GTG GAG GAC CAG AAG GAG GAG GTG CAA TTG CTA  
  
 V F G L T A N S D T H L L Q 480  
 GTG TTC GGA TTG ACT GCC AAC TCT GAC ACC CAC CTG CTT CAG  
  
 G Q S L T L T L E S P P G S 522  
 GGG CAG AGC CTG ACC CTG ACC TTG GAG AGC CCC CCT GGT AGT  
  
 S P S V Q C R S P R G K N I 564  
 AGC CCC TCA GTG CAA TGT AGG AGT CCA AGG GGT AAA AAC ATA

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+140  
 Q G G G G G G A A G A A C C T C L S V S Q L E L Q  
 C A G G G G G A A G A A C C T C T C T C A G C T G G A G C T C C A G  
 606  
  
 +160  
 D S G T W T C T V L Q N Q K  
 G A T A G T G G C A C C T G G A C A T G C A C T G T C T T G C A G A A C C A G A A G  
 648  
 ↗Hinge  
 +180  
 K V E F K I D I V V L A F E  
 A A G G T G G A G T T C A A A A T A G A C A T C G T G G T G C T A G C T T T C G A G  
 690  
  
 +190  
 R K C C V E C P P C P  
 C G C A A A T G T T G T G T C G A G T G C C C A C C G T G C C C A G G T A A G C C A G C C  
 705  
  
 C A G G C C T C G C C C T C C A G C T C A A G G C G G A C A G G T G C C C T A G A G T A G C C T G C A T C C  
 760  
 ↗CH2  
 A  
 A G G A C A G G C C C A G C T G G G T G C T G A C A C G T C C A C C T C C A T C T C T T C C T C A G C A  
 814  
  
 +200  
 P P V A G P S V F L F P P K  
 C C A C C T G T G G C A G G A C C G T C A G T C T T C T T C C T C C C C A A A A  
 856

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+210
P   K   D   T   L   M   I   S   R   T   P   E   V   T
CCC AAG GAC ACC CTC ATG ATC TCC CGG ACC CCT GAG GTC ACG      898

+220
C   V   V   V   D   V   S   H   E   D   P   E   V   Q
TGC GTG GTG GAC GAC GTG AGC CAC GAA GAC CCC GAG GTC CAG      940

+230
F   N   W   Y   V   D   G   V   E   V   H   N   A   K
TTC AAC TGG TAC GTG GAC GGC GTG GAG GTG CAT AAT GCC AAG      982

+240
T   K   P   R   E   E   Q   F   N   S   T   F   R   V
ACA AAG CCA CGG GAG GAG CAG TTC AAC AGC ACG TTC CGT GTG      1024

+250
V   S   V   L   T   V   V   H   Q   D   W   L   N   G
GTC AGC GTC CTC FCC GTT GTG CAC CAG GAC TGG CTG AAC GGC      1066

+260
K   E   Y   K   C   K   V   S   N   K   G   L   P   A
AAG GAG TAC AAG TGC AAG GTC TCC AAC AAA GGC CTC CCA GCC      1108

+270
+280
+290
P   I   E   K   T   I   S   K   T   K
CCC ATC GAG AAA ACC ATC TCC AAA ACC AAAGTGGGACCCGCGGG      1154

```

**7/27**

TATGAGGGCCACATGGACAGAGCGCGGCTCGGCCACCCCTCTGCCCTGGGAGTGA 1209

3  
H  
C  
↑  
L

$$+ 300$$

୦ ୨ ୫ ୪ ୦ ୩

CCGCTGTGCCAACCTCTGTCTCCCTACAGG CAG CCC CGA GAA CCA CAG 1256

+310

**+320**

V Y T L P P S R E E M T K N  
GTG TAC ACC CTG CCC CCA TCC CGG GAG GAG ATG ACC AAG AAC 1298

**+330**

Q V S L T C L V K G F Y P S  
CAG GTC AGC CTG ACC TGC CTG GTC AAA GGC TTC TAC CCC AGC 1340

**+340**

D I A V E W E S N G Q P E N  
GAC ATC GCC GTG GAG TGG GAG AGC AAT GGG CAG CCG GAG AAC 1382

**+350**

**+360**

N Y K T T P P M L D S D G S  
 AAC TAC AAG ACC ACA CCT CCC ATG CTG GAC TCC GAC GGC TCC 1424

**+370**

F F L Y S K L T V D K S R W  
TTC TTC CTC TAC AGC AAG CTC ACC GTG GAC AAG AGC AGG TGG 1466

[illegible]





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A D S R R S L W D Q G N F P 354  
GCT GAC TCA AGA AGA AGC CTT TGG GAC CAA GGA AAC TTC CCC

+70  
L I I K N L K I E D S D T Y 396  
CTG ATC ATC AAG AAT CTT AAG ATA GAA GAC TCA GAT ACT TAC

+80  
I C E V E D Q K E E V Q L L 438  
ATC TGT GAA GTG GAG GAC CAG AAG GAG GAG GTG CAA TTG CTA

+90  
V F G L T A N S D T H L L Q +110  
GTG TTC GGA TTG ACT GCC AAC TCT GAC ACC CAC CTG CTT CAG

+100  
G Q S L T L L T L E S P P G S 480  
GGG CAG AGC CTG ACC CTG ACC TTG GAG AGC CCC CCT GGT AGT

+110  
S P S V Q C R S P R G K N I 522  
AGC CCC TCA GTG CAA TGT AGG AGT CCA AGG GGT AAA AAC ATA

+120  
S P S V Q C R S P R G K N I 564  
AGC CCC TCA GTG CAA TGT AGG AGT CCA AGG GGT AAA AAC ATA

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+140      Q      G      G      K      T      L      S      V      S      Q      L      E      L      Q
CAG GGG GGG AAG ACC CTC TCC GTG TCT CAG CTG GAG CTC CAG      606

      D      S      G      T      W      T      C      T      V      L      Q      N      Q      K
GAT AGT GGC ACC TGG ACA TGC ACT GTC TTG CAG AAC CAG AAG      648
      +160
      K      V      E      F      K      I      D      I      V      V      L      A      F      A
AAG GTG GAG TTC AAA ATA GAC ATC GTG GTG CTA GCT TTC GCC      690
      +170
      S      T      K      G      P      S      V      F      P      L      A      P      C      S
TCC ACC AAG GGC CCA TCG GTC TTC CCC CTG GCG CCC TGC TCC      732
      +190
      R      S      T      S      E      S      T      A      A      L      G      C      L      V
AGG AGC ACC TCC GAG AGC ACA GCC GCC GCG GGC TGC CTG GTC      774
      +200
      K      D      Y      F      P      E      P      V      T      V      S      W      N      S
AAG GAC TAC TTC CCC GAA CCG GTG ACG GTG TCG TGG AAC TCA      816
      +210
      G      A      L      T      S      G      V      H      T      F      P      A      V      L
GGC GCT CTG ACC AGC GGC GTG CAC ACC TTC CCA GCT GTC CTA      858
      +220
      +230

```

→CH1

+180

+240  
Q S S G L Y S L S S V V T V +250  
CAG TCC TCA GGA CTC TAC TCC CTC AGC AGC AGC GTG GTG ACC GTG 900

+260  
P S S N F G T Q T Y T C N V  
CCC TCC AGC AAC TTC GGC ACC CAG ACC TAC ACC TGC AAC GTA 942

+270  
D H K P S N T K V D K T V  
GAT CAC AAG CCC AGC AAC ACC AAG GTG GAC AAG ACA GTTGGTG 985

12/27  
AGAGGCCAGCTCAGGGAGGGAGGTGTCTGTGGAAGCCAGGCTCAGCCCTCCTG 1040

CCTGGACGACCCCGGCTGTGCAGCCCCAGCCAGGCAGCAAGGCAGGCCCAT 1095

CTGTCTCCTCACCCGGAGGCCTCTGTCCCGCCCCACTCATGCTCAGGGAGAGGTC 1150

TTCTGGCTTTTCCACCAGGCTCCAGGCAGGCACAGGCTGGTGCCCCCTACCCCA 1205

GGCCCTTCACACAGGGCAGGTGCTTGGCTCAGACCTGCCAAAGCCATATCC 1260

13/27

GGGAGGACCCCTGCCCTGACCTAAGCCGACCCCAAGGCCAAACTGTCCACTCCC 1315

TCAGCTCGGACACCTTCTCTCCTCCAGATCCGAGTAACTCCCAATCTTCTCTCT 1370

→ Hinge  
+280

E R K C C V E C P P C P  
GCAGAG CGC AAA TGT TGT GTC GAG TGC CCA CCG TGC CCAGGTAAG 1415

CCAGCCCAGGCCTGCCCCCTCCAGCTCAAGCGGGGACAGGTGCCCTAGAGTAGCCT 1470

GCATCCAGGGACAGGCCCCAGCTGGGTGCTGACACGTCACCTCCATCTCTTCCT 1525

└→ CH2

+290 A P P V A G P S V F L F P P  
CAGCA CCA CCT GTG GCA GGA CCG TCA GTC TTC CTC TTC CCC CCA 1569

+310

K P K D T L M I S R T P E V  
AAA CCC AAG GAC ACC CTC ATG ATC TCC CGG ACC CCT GAG GTC 1611

+320

+330

T C V V D V S H E D P E V  
ACG TGC GTG GTG GAC GTG AGC CAC GAA GAC CCC GAG GTC 1653

14/27

Q F N W Y V D G V E V H N A 1695  
 CAG TTC AAC TGG TAC GTG GAC GGC GTG GAG GTG CAT AAT GCC  
 +340  
 K T K P R E E Q F N S T F R 1737  
 AAG ACA AAG CCA CGG GAG GAG CAG TTC AAC AGC ACG TTC CGT  
 +350  
 +360 V S V L T V V H Q D W L N 1779  
 GTG GTC AGC GTC CTC ACC GTT GTG CAC CAG GAC TGG CTG AAC  
 +370  
 G K E Y K C K V S N K G L P 1821  
 GGC AAG GAG TAC AAG TGC AAG GTC TCC AAC AAA GGC CTC CCA  
 +380  
 +390 A P I E K T I S K T K 1866  
 GCC CCC ATC GAG AAA ACC ATC TCC AAA ACC AAAGTGGGACCCGC  
 GGGGTATGAGGGCCACATGGACAGAGCGCGGCTCGGCCACCCCTCTGCCCTGGGA 1921  
 →CH3  
 +400  
 GTGACCGCTGTGCCAACCTCTGTCCCTACAGG CAG CCC CGA GAA CCA CAG 1972  
 G Q P R E P Q

15/27

+410  
 V Y T L P P S R E E M T K N  
 GTG TAC ACC CTG CCC CCA TCC CGG GAG GAG ATG ACC AAG AAC 2014

+420  
 Q V S L T C L V K G F Y P S  
 CAG GTC AGC CTG ACC TGC CTG GTC AAA GGC TTC TAC CCC AGC 2056

+430  
 D I A V E W E S N G Q P E N  
 GAC ATC GCC GTG GAG TGG GAG AGC AAT GGG CAG CCG GAG AAC 2098

+440  
 N Y K T T P P M L D S D G S  
 AAC TAC AAG ACC ACA CCT CCC ATG CTG GAC TCC GAC GGC TCC 2140

+450  
 F F L Y S K L T V D K S R W  
 TTC TTC CTC TAC AGC AAG CTC ACC GTG GAC AAG AGC AGG TGG 2182

+460  
 Q Q G N V F S C S V M H E A  
 CAG CAG GGG AAC GTC TTC TCA TGC TCC TCC GTG ATG CAT GAG GCT 2224

+470  
 +480  
 L H N H Y T Q K S L S L S P  
 CTG CAC AAC CAC TAC ACG CAG AAG AGC CTC TCC TCC CTG TCT CCG 2266

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G K stop

GGT AAA TGAGTGCCACGGCCGGCAAGCCCCCGCTCCCCAGGCTCTCGGGGTCG 2319

CGTGAGGATGCTTGGCACGTACCCCGTGATACATACTTCCCAGGCACCCAGCATGG 2374

AAATAAGCACCCAGCGCTGCCCTGGGCCCTGCCGAGACTGTGATGGTTCTTTCC 2429

GTGGGTCAGGCCGAGTCTGAGGCCCTGAGTGGCATGAGGGAGGCAGAGTGGGTC... 2482



FIGURE 5

CAAGCCAGAGCCCTGCCATTCTGTGGGCTCAGGTCCCTACTGCTCAGCCCCCTT 55  
 CCTCCCTCGGAAGGCCACAATG AAC CGG GGA GTC CCT TTT AGG CAC 102  
 M N R G V P F R H  
 -20  
 -10  
 L L L V L Q L A L L P A A T  
 TTG CTT CTG GTG CTG CAA CTG GCG CTC CTC CCA GCA GCC ACT 144  
 -1 +1 +10  
 Q G K K V V L G K K K G D T V  
 CAG GGA AAG AAA GTG GTG CTG GGC AAA AAA GGG GAT ACA GTG 186  
 +20  
 E L T C T A S Q K K S I Q F  
 GAA CTG ACC TGT ACA GCT TCC CAG AAG AAG AGC ATA CAA TTC 228  
 +30 +40  
 H W K N S N Q I K I L G N Q  
 CAC TGG AAA AAC TCC AAC CAG ATA AAG ATT CTG GGA AAT CAG 270  
 +50  
 G S F L T K G P S K L N D R  
 GGC TCC TTC TTA ACT AAA GGT CCA TCC AAG CTG AAT GAT CGC 312

|                   |
|-------------------|
| 17/27<br>FIGURE 5 |
| 18/27             |
| 19/27             |
| 20/27             |



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```

+140      +150
  Q  G  G  G  G  G  K  T  L  S  V  S  Q  L  E  L  Q
CAG GGG GGG AAG ACC CTC TCC GTG TCT CAG CTG GAG CTC CAG      606

      +160
  D  S  G  G  T  W  T  C  T  V  L  Q  N  Q  K
GAT AGT GGC ACC TGG ACA TGC ACT GTC TTG CAG AAC CAG AAG      648
                                     ↳Ckappa
      +170      +180
  K  V  E  F  K  I  D  I  V  V  L  A  F  T
AAG GTG GAG TTC AAA ATA GAC ATC GTG GTG CTA GCT TTC ACT      690

      +190
  V  A  A  P  S  V  F  I  F  P  P  S  D  E
GTG GCT GCA CCA TCT GTC TTC ATC TTC CCG CCA TCT GAT GAG      732

      +200
  Q  L  K  S  G  T  A  S  V  V  C  L  L  N
CAG TTG AAA TCT GGA ACT GCC TCT GTT GTG TGC CTG CTG AAT      774

      +210      +220
  N  F  Y  P  R  E  A  K  V  Q  W  K  V  D
AAC TTC TAT CCC AGA GAG GCC AAA GTA CAG TGG AAG GTG GAT      716

      +230
  N  A  L  Q  S  G  N  S  Q  E  S  V  T  E
AAC GCC CTC CAA TCG GGT AAC TCC CAG GAG AGT GTC ACA GAG      758

```

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Q D S K D S T Y S L S T L +250  
CAG GAC AGC AAG GAC AGC ACC TAC AGC CTC AGC AGC ACC CTG 900

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| T   | L   | S   | K   | A   | D   | Y   | E   | K   | H   | K   | V   | Y   | A   |
| ACG | CTG | AGC | AAA | GCA | GAC | TAC | GAG | AAA | CAC | AAA | GTC | TAC | GCC |

+260

942

+270

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| C   | E   | V   | T   | H   | Q   | G   | L   | S   | S   | P   | V   | T   | K   |
| TGC | GAA | GTC | ACC | CAT | CAG | GGC | CTG | AGC | TCG | CCC | GTC | ACA | AAG |

984

|      |     |     |     |     |     |     |      |                         |      |
|------|-----|-----|-----|-----|-----|-----|------|-------------------------|------|
| +280 |     |     |     |     |     |     |      |                         |      |
| S    | F   | N   | R   | G   | E   | C   | stop |                         |      |
| AGC  | TTC | AAC | AGG | GGA | GAG | TGT | TAG  | AGGAGAAGTGCCCCCACCTGCTC | 1032 |

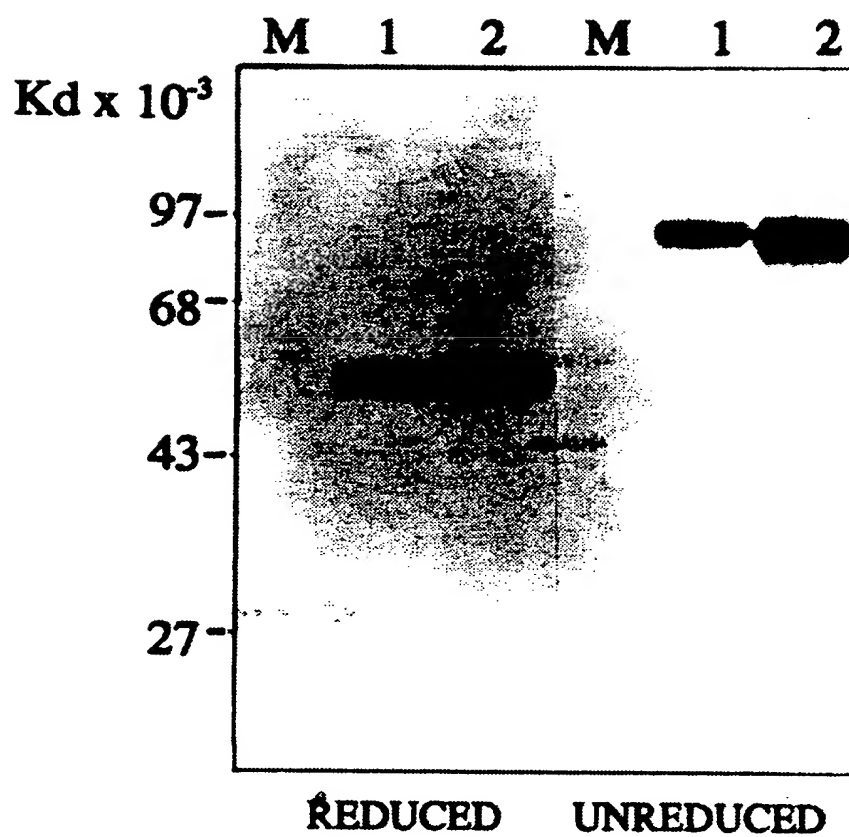
CTCAGTCCAGCCTGACCCCTCCCATCTCTTGGCTCTGACCCCTTTTCCACAGG 1088

GGACCTACCCCTATTGCGGTCTCCAAGCTCATCTTCACCTACCCCCCTCCTCC 1144

TCCTT

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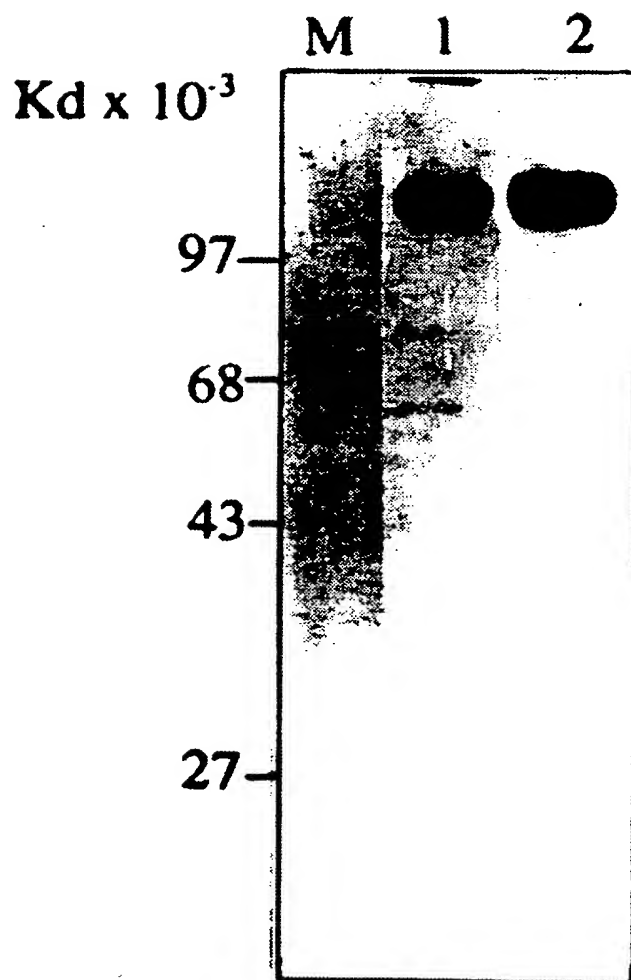
Figure 6



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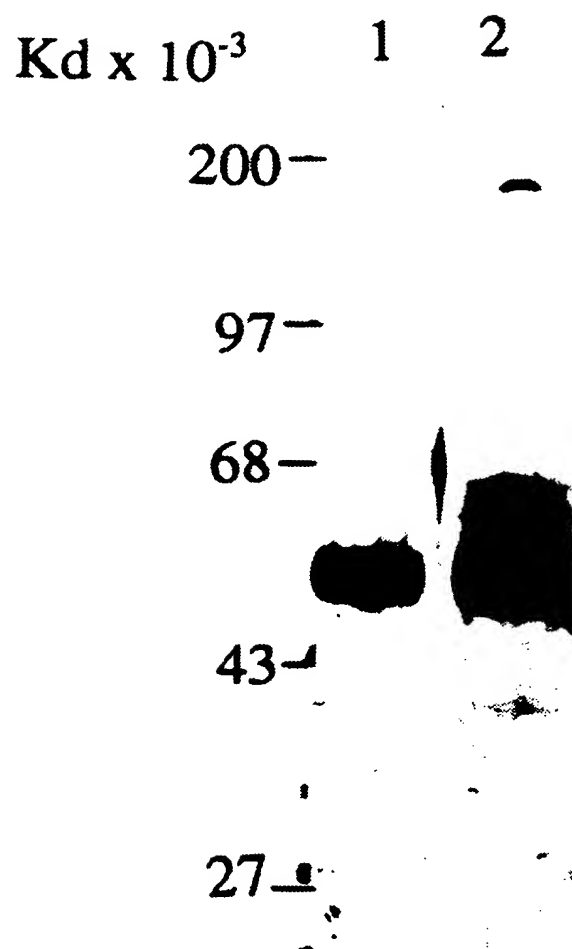
Figure 7



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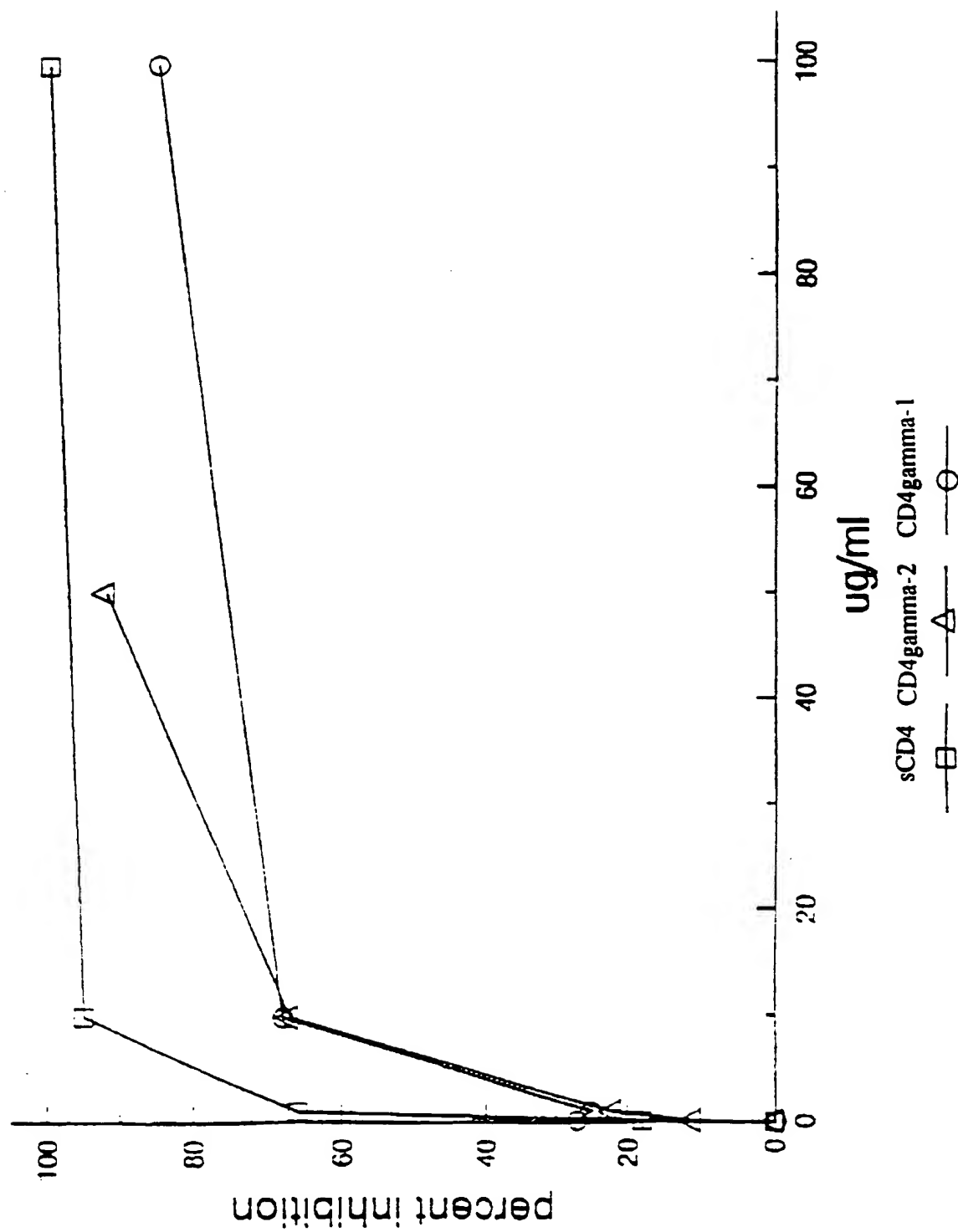
Figure 8



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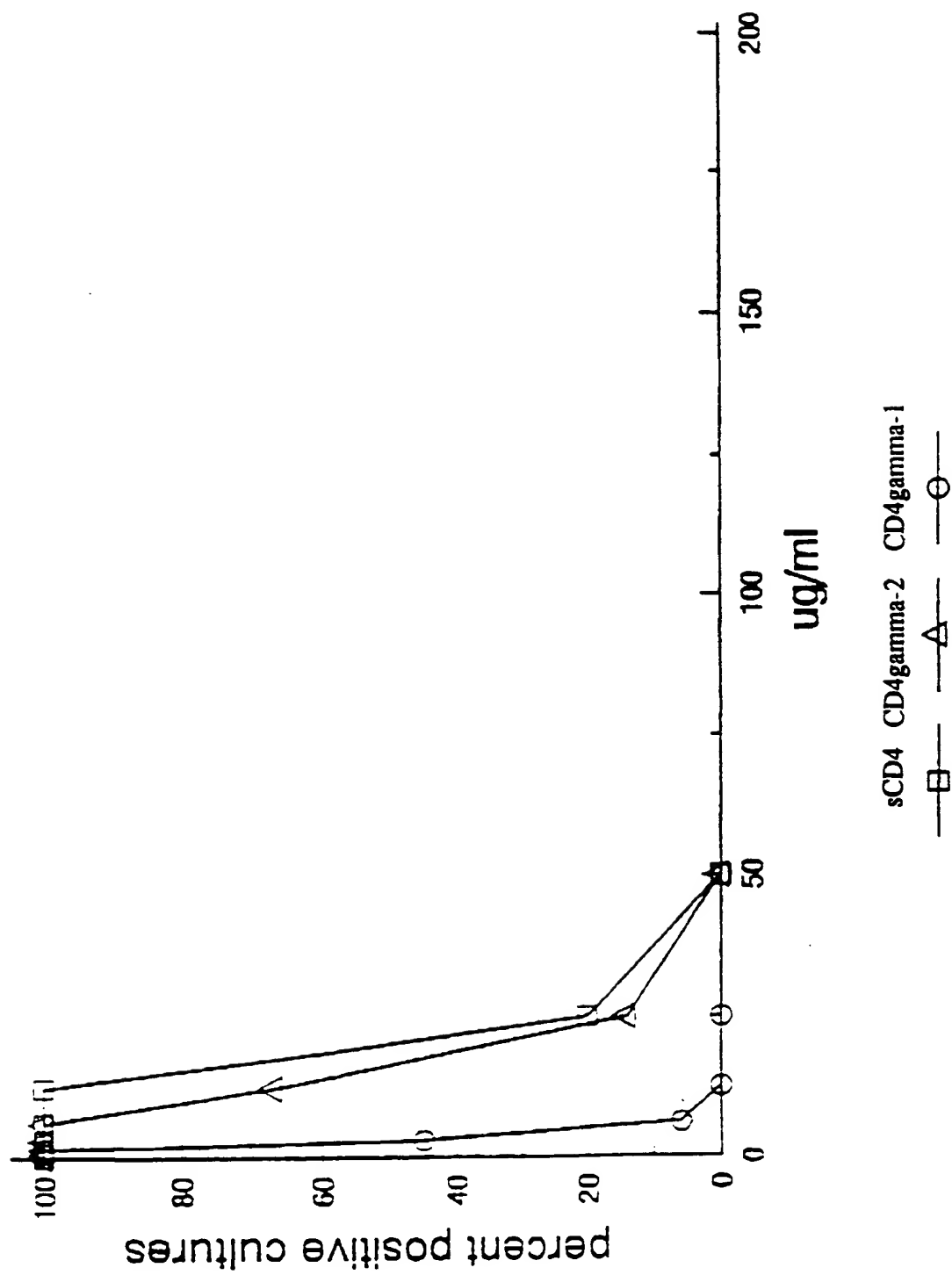
FIGURE 9





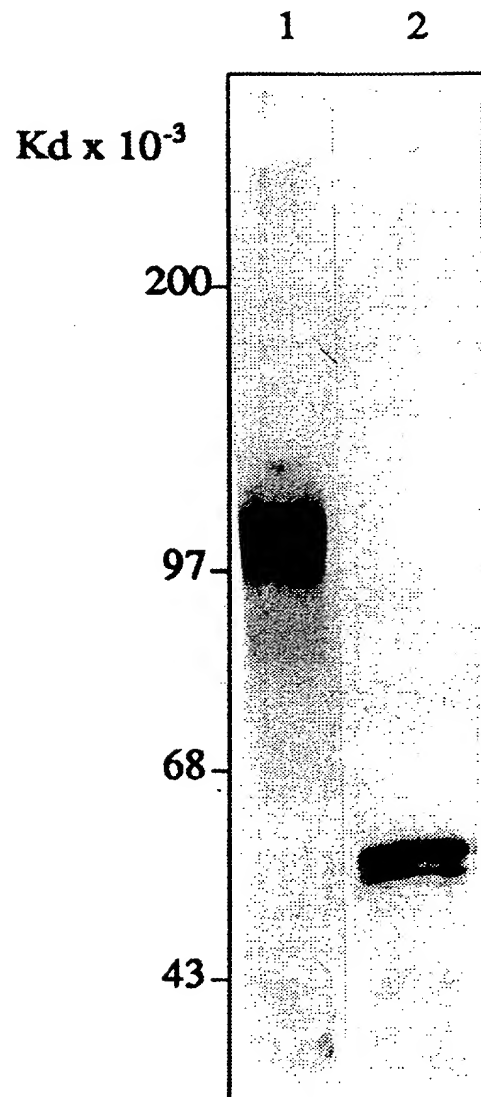
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FIGURE 10



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Figure 11



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Figure 12B

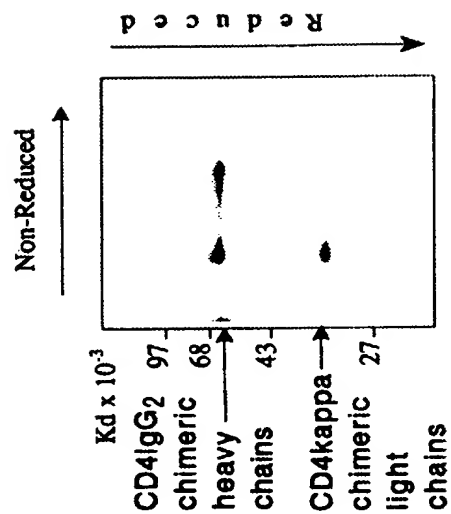
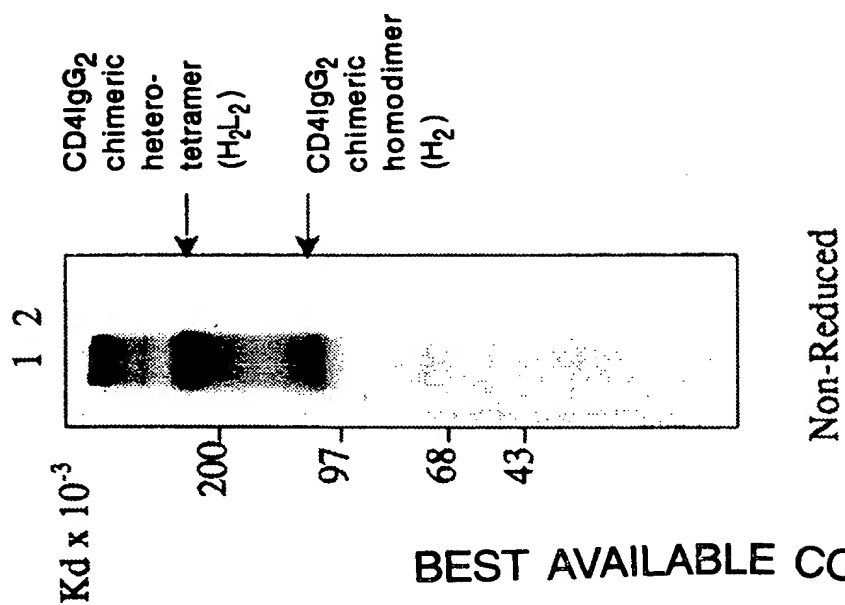


Figure 12A



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